



# **UAV SYSTEMS COMPARISON**

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**RQ-1B PREDATOR**

**BQM-155A HUNTER**

**RQ-4A GLOBAL HAWK**



# UAV COMPARISON DATA

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|            | PREDATOR                                | PIONEER                         | HUNTER                        |
|------------|---|---------------------------------|-------------------------------|
| SUBSYSTEMS | 4 Air Vehicles                          | 5 Air Vehicles                  | 8 Air Vehicles                |
|            | 1 GCS                                   | 1 GCS                           | 2 Ground Control Stations     |
|            | 1 Trojan Spirit II Dissemination System | 1 Tracking & Communication Unit | 1 Mission Planning Shelter    |
|            | Ground Support Equipment                | 1 Portable Control Station      | 1 Launch and Recovery Shelter |
|            |   | 1 Launcher Truck                | 8 Modular Mission Payloads    |
|            |   | Ground Support Equipment        | 4 Air Data Relays             |
|            |   |                                 | Launch and Recovery Equipment |
|            |   |                                 | Ground Support Equipment      |



# UAV COMPARISON DATA

|                             | <b>PREDATOR</b>                    | <b>PIONEER</b>               | <b>HUNTER</b>                         |
|-----------------------------|------------------------------------|------------------------------|---------------------------------------|
| <b>SENSORS</b>              | EO, IR and SAR                     | EO and IR                    | EO and IR                             |
| <b>DEPLOYMENT</b>           | Multiple C-130 Sorties             | 5 C-5s                       |                                       |
| <b>RADIUS</b>               | 926 km (500 nm)                    | 185 km GCS,<br>40km PCS      | 125 km GCS,<br>50km LRS, 75 km<br>ADR |
| <b>ENDURANCE</b>            | >20 hrs                            | 4-5 hrs                      |                                       |
| <b>MAX ALTITUDE</b>         | 25 kft                             | 15 kft                       | 16 kft                                |
| <b>CRUISE SPEED</b>         | 70-120 knts                        | 65 knts                      | 70 knts                               |
| <b>RUNWAY</b>               | 3000' x 100' min                   | 2000' x 80' min              | 2000' x 100' min                      |
| <b>DATA LINK</b>            | LOS C band or Ku<br>Band Satellite | LOS C band or<br>UHF         | LOS C band                            |
| <b>FUEL</b>                 | 110 octane low<br>lead AVGAS       | 100 octane low<br>lead AVGAS | Type 87 MOGAS                         |
| <b>MAX GROSS<br/>T/O WT</b> | 2100 lbs                           | 455 lbs                      | 2100 lbs                              |



# UAV COMPARISON DATA

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|               | PREDATOR                                  | PIONEER                                   | HUNTER                                |
|---------------|---|---|---------------------------------------|
| POWERPLANT    | 105hp Rotax 914 turbocharged 4 cyl engine | 27 hp Sachs 2 cyl, 2 stroke pusher engine | 2 Moto Guzzi 750cc engs pusher/puller |
| LENGTH        | 27 ft                                     | 14 ft                                     | 22.6 ft                               |
| HEIGHT        | 6.9 ft                                    | 3.3 ft                                    | 5.6 ft                                |
| WEIGHT        | 950 lbs                                   | 455 lbs                                   | 1200 lbs                              |
| WING SPAN     | 48.7 ft                                   | 16.9 ft                                   | 29.2 ft                               |
| FUEL CAPACITY | 665 lbs                                   | 45 ltrs                                   | 190 ltrs                              |
| PAYLOAD       | 450 lbs                                   | 200 lbs                                   | 200 lbs                               |



# UAV COMPARISON DATA

|                           | <b>PREDATOR</b>                       | <b>PIONEER</b>   | <b>HUNTER</b>                         |
|---------------------------|---------------------------------------|--|---------------------------------------|
| <b>DATA LINK LOSS</b>     | Auto Return Home                      | Auto Return Home   | Auto Return Home                      |
| <b>EMERGENCY RECOVERY</b> | Parachute                             |  | Parachute                             |
| <b>WEATHER LIMITS:</b>    |                                       |  |                                       |
| <b>WINDS</b>              | T/O Cross: 15 kts<br>T/O Head: 30 kts | T/O Cross: 20 kts<br>T/O Head: 25 kts<br>T/O Tail: 5 kts | T/O Cross: 15 kts<br>T/O Head: 25 kts |
| <b>RAIN</b>               | No visible moisture                   | No visible moisture                                      | Limited visible moisture              |
| <b>LIMITED ICING</b>      | No                                    | No   | No                                    |
| <b>TURBULENCE</b>         | Light                                 | Light  | Light                                 |



# WHY USE PIONEER?

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## ■ Advantages

- **MAGTF Commander remains in control of assets**
- **Less reliant on outside sources for airborne recce**
- **Operational flexibility (dynamic retasking)**
- **Smaller footprint than other UAV systems**



# QUESTIONS?



**THIS BRIEF IS UNCLASSIFIED**